

CONFIDENTIAL

File - ED-188C

27 January 1959

MEMORANDUM FOR THE RECORD

SUBJECT: Flight Test of the "Jericho Horn" (ED-188C)

1. The initial flight test for the "Jericho Horn" was conducted on 16 January 1959 and witnessed by the undersigned, in accompany with [redacted] at the contractor's test site.

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2. The purpose of the test flight was to determine the sound power output of the whistle under flight conditions and functioning of the cockpit controlled iris, located at the whistle intake. The controllable iris allows the pilot to adjust the air mass flow rate in accordance with the air speed to obtain the maximum whistle efficiency.

3. Six passes were made over the test site at various speeds, 220-245 MPH, at an altitude of 300 feet. The iris was adjusted to a different position for each pass. The iris cockpit control functioned properly during the first five passes. Upon the final pass the iris became frozen and a new setting was impossible. The air temperature was 10F and the atmosphere quite cloudy. Examination of the iris revealed that moisture had condensed upon the metal parts and froze. It is recommended that a good graphite coating be applied to the iris or a low temperature silicon lubricant employed. The maximum sound pressure level observed was approximately 108 d.b.

4. Although the laboratory tests rate this whistle at 150 d.b. output, actual flight conditions resulted in a much lower sound pressure level (108 d.b.). The terrain at the test site is very flat with no structures or dense wooded areas for several miles. In the present state this whistle can not be considered as a harassment item. It does however attract attention. Upon hearing the whistle for the first time, and completely unaware that any such device was being tested, a charter pilot, who flew the undersigned to the test site, was of the opinion that either the oil or fuel pump of the test aircraft was failing. He expressed concern for fear the test aircraft might crash due to motor failure. Although this unbiased witness was concerned about the noise, he was not frightened to any degree.

5. Upon completion of the test the undersigned and [redacted] discussed the results. In order for such a device to have value [redacted] a sound pressure level of at least 120 d.b. at 250-9000 cps - Discomfort Threshold must be obtained. If a sound pressure level of

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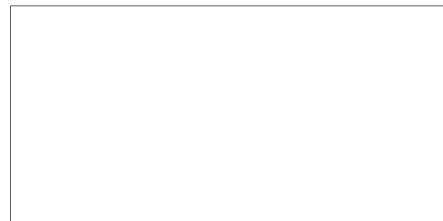
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Flight tests in connection with these refinements will be conducted in late February. A Cessna "180" will be used during the next test in lieu of the twin engine Beechcraft to conserve funds.

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